[redacted]

[redacted]

Registered Address [redacted]

[redacted]

Dalradian Gold Ltd

[redacted]

Tel: [redacted]

Fax: [redacted]

4225

Attention :	[redacted]
Date :	23rd December, 2015
Your reference :	DCS
Our reference :	Test Report 15/17648 Batch 1
Location :	Curraghinalt
Date samples received :	10th December, 2015
Status :	Final report
Issue :	1

Seven samples were received for analysis on 10th December, 2015 of which seven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

[redacted]

[redacted] **BSc**
Project Manager

Client Name: Dalradian Gold Ltd
Reference: DCS
Location: Curraghinalt
Contact: [redacted]
JE Job No.: 15/17648

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

J E Sample No.	1-6	7-12	13-18	19-24	25-30	31-36	37-42				LOD/LOR	Units	Method No.
Sample ID	DCS5	DCS6	DCS7	DCS1	DCS2	DCS3	DCS4						
Depth													
COC No / misc													
Containers	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G						
Sample Date	09/12/2015	09/12/2015	09/12/2015	09/12/2015	09/12/2015	09/12/2015	09/12/2015						
Sample Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	10/12/2015	10/12/2015	10/12/2015	10/12/2015	10/12/2015	10/12/2015	10/12/2015						
Dissolved Arsenic #	<0.9	<0.9	2.6	1.2	0.9	2.8	2.7				<0.9	ug/l	TM30/PM14
Dissolved Cadmium #	0.11	0.05	0.19	0.03	0.43	<0.03	0.20				<0.03	ug/l	TM30/PM14
Total Dissolved Chromium #	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	<0.2				<0.2	ug/l	TM30/PM14
Dissolved Copper #	<3	<3	<3	<3	<3	<3	<3				<3	ug/l	TM30/PM14
Total Dissolved Iron #	0.7792	<0.0047	0.0075	1.1310	0.0352	1.0160	0.7594				<0.0047	mg/l	TM30/PM14
Dissolved Lead #	<0.4	<0.4	3.8	1.1	6.5	<0.4	<0.4				<0.4	ug/l	TM30/PM14
Dissolved Mercury #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				<0.5	ug/l	TM30/PM14
Dissolved Nickel #	0.5	<0.2	5.8	<0.2	7.4	<0.2	<0.2				<0.2	ug/l	TM30/PM14
Dissolved Zinc #	3.8	<1.5	10.5	3.1	12.3	3.1	4.8				<1.5	ug/l	TM30/PM14
Total Zinc	5	<3	12	4	13	4	5				<3	ug/l	TM30/PM14
Total Hardness Dissolved (as CaCO3)	16	<1	202	7	200	22	16				<1	mg/l	TM30/PM14
EPH (C8-C40) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM5/PM30
GRO (>C4-C8) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
GRO (>C8-C12) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
GRO (>C4-C12) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
Hexavalent Chromium	<2	<2	<2	<2	<2	<2	<2				<2	ug/l	TM38/PM0
Total Dissolved Chromium III	<2	<2	<2	<2	<2	<2	<2				<2	ug/l	NONE/NONE
BOD (Settled) #	2	<1	1	2	<1	3	1				<1	mg/l	TM58/PM0
pH #	7.55	7.76	8.07	6.79	7.76	7.45	6.83				<0.01	pH units	TM73/PM0
Total Suspended Solids #	<10	<10	<10	<10	<10	<10	11				<10	mg/l	TM37/PM0

Please see attached notes for all abbreviations and acronyms

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/17648

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a [redacted] approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

[redacted]

Method Code Appendix

JE Job No: 15/17648

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM37	Modified USEPA 160.2 .Gravimetric determination of Total Suspended Solids. Sample is filtered and the resulting residue is dried and weighed.	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				
TM58	Modified USEPA methods 405.1 and BS 5667-3. Measurement of Biochemical Oxygen Demand.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
NONE	No Method Code	NONE	No Method Code				

[redacted]

[redacted]

Registered Address [redacted]

[redacted]

Dalradian Gold Ltd

[redacted]

Tel: [redacted]

Fax: [redacted]

Attention :	[redacted]
Date :	3rd February, 2016
Your reference :	
Our reference :	Test Report 16/3099 Batch 1
Location :	Curraghinalt Gold
Date samples received :	7th January, 2016
Status :	Final report
Issue :	1

Seven samples were received for analysis on 7th January, 2016 of which seven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

[redacted]

[redacted] **BSc**
Project Manager

[redacted]

Client Name: Dalradian Gold Ltd
Reference:
Location: Curraghinalt Gold
Contact: [redacted]
JE Job No.: 16/3099

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

J E Sample No.	1-6	7-12	13-18	19-24	25-30	31-36	37-42				LOD/LOR	Units	Method No.
Sample ID	DCS1	DCS2	DCS3	DCS4	DCS5	DCS7	DCS6						
Depth													
COC No / misc													
Containers	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G						
Sample Date	06/01/2016	06/01/2016	06/01/2016	06/01/2016	06/01/2016	06/01/2016	06/01/2016						
Sample Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	07/01/2016	07/01/2016	07/01/2016	07/01/2016	07/01/2016	07/01/2016	07/01/2016						
Dissolved Arsenic #	1.8	6.7	5.3	<0.9	<0.9	5.1	<0.9				<0.9	ug/l	TM30/PM14
Dissolved Cadmium #	<0.03	0.25	<0.03	0.15	<0.03	0.12	<0.03				<0.03	ug/l	TM30/PM14
Total Dissolved Chromium #	<0.2	0.3	<0.2	0.3	0.5	<0.2	<0.2				<0.2	ug/l	TM30/PM14
Dissolved Copper #	<3	<3	<3	<3	<3	<3	<3				<3	ug/l	TM30/PM14
Total Dissolved Iron #	1.2760	0.1227	0.9930	0.7784	0.7899	0.2064	<0.0047				<0.0047	mg/l	TM30/PM14
Dissolved Lead #	1.2	3.3	0.8	<0.4	<0.4	4.0	<0.4				<0.4	ug/l	TM30/PM14
Dissolved Mercury #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				<0.5	ug/l	TM30/PM14
Dissolved Nickel #	1.2	5.5	1.1	1.6	1.1	5.1	<0.2				<0.2	ug/l	TM30/PM14
Dissolved Zinc #	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5				<1.5	ug/l	TM30/PM14
Total Zinc	4	9	6	4	5	9	<3				<3	ug/l	TM30/PM14
Total Hardness Dissolved (as CaCO3)	12	208	57	15	18	207	<1				<1	mg/l	TM30/PM14
EPH (C8-C40) #	<10	<10	240	<10	<10	<10	<10				<10	ug/l	TM5/PM30
GRO (>C4-C8) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
GRO (>C8-C12) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
GRO (>C4-C12) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
Hexavalent Chromium	<2	<2	<2	<2	<2	<2	<2				<2	ug/l	TM38/PM0
Total Dissolved Chromium III	<2	<2	<2	<2	<2	<2	<2				<2	ug/l	NONE/NONE
BOD (Settled) #	1	<1	<1	1	1	<1	<1				<1	mg/l	TM58/PM0
pH #	7.59	7.58	7.47	7.10	7.31	7.47	7.64				<0.01	pH units	TM73/PM0
Total Suspended Solids #	<10	<10	<10	<10	<10	<10	<10				<10	mg/l	TM37/PM0

Please see attached notes for all abbreviations and acronyms

[redacted]

Notification of Deviating Samples

Client Name: Dalradian Gold Ltd
Reference:
Location: Curraghinalt Gold
Contact: [redacted]

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/3099						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/3099

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

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All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

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As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

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Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a [redacted] approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

[redacted]

Method Code Appendix

JE Job No: 16/3099

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM37	Modified USEPA 160.2 .Gravimetric determination of Total Suspended Solids. Sample is filtered and the resulting residue is dried and weighed.	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				
TM58	Modified USEPA methods 405.1 and BS 5667-3. Measurement of Biochemical Oxygen Demand. When cBOD (Carbonaceous BOD) is requested a nitrification inhibitor is added which prevents the oxidation of reduced forms of nitrogen, such as ammonia, nitrite and organic nitrogen which exert a nitrogenous demand.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
NONE	No Method Code	NONE	No Method Code				

[redacted]

[redacted]

Registered Address [redacted]

[redacted]

Dalradian Gold Ltd

[redacted]

Tel: [redacted]

Fax: [redacted]

Attention :	[redacted]
Date :	17th February, 2016
Your reference :	DCS
Our reference :	Test Report 16/4442 Batch 1
Location :	Curraghinalt
Date samples received :	3rd February, 2016
Status :	Final report
Issue :	1

Seven samples were received for analysis on 3rd February, 2016 of which seven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

[redacted]

[redacted] **BSc**
Project Manager

[redacted]

Client Name: Dalradian Gold Ltd
Reference: DCS
Location: Curraghinalt
Contact: [redacted]
JE Job No.: 16/4442

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

J E Sample No.	1-6	7-12	13-18	19-24	25-30	31-36	37-42				LOD/LOR	Units	Method No.
Sample ID	DCS1	DCS2	DCS3	DCS4	DCS5	DCS6	DCS7						
Depth													
COC No / misc													
Containers	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G	V HN P BOD G						
Sample Date	03/02/2016	03/02/2016	03/02/2016	03/02/2016	03/02/2016	03/02/2016	03/02/2016						
Sample Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	03/02/2016	03/02/2016	03/02/2016	03/02/2016	03/02/2016	03/02/2016	03/02/2016						
Dissolved Arsenic #	<0.9	<0.9	1.3	<0.9	<0.9	<0.9	<0.9				<0.9	ug/l	TM30/PM14
Dissolved Cadmium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03				<0.03	ug/l	TM30/PM14
Total Dissolved Chromium #	<0.2	0.7	<0.2	<0.2	<0.2	<0.2	<0.2				<0.2	ug/l	TM30/PM14
Dissolved Copper #	<3	<3	<3	<3	<3	<3	<3				<3	ug/l	TM30/PM14
Total Dissolved Iron #	0.3198	0.1852	0.3050	0.2420	0.2365	<0.0047	0.2213				<0.0047	mg/l	TM30/PM14
Dissolved Lead #	<0.4	<0.4	2.0	1.2	0.6	<0.4	<0.4				<0.4	ug/l	TM30/PM14
Dissolved Mercury #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				<0.5	ug/l	TM30/PM14
Dissolved Nickel #	0.4	5.3	0.7	0.8	0.9	<0.2	4.7				<0.2	ug/l	TM30/PM14
Dissolved Zinc #	17.2	26.1	17.1	8.0	8.2	<1.5	30.4				<1.5	ug/l	TM30/PM14
Total Zinc	20	33	18	10	9	<3	35				<3	ug/l	TM30/PM14
Total Hardness Dissolved (as CaCO3)	18	195	33	21	22	<1	193				<1	mg/l	TM30/PM14
EPH (C8-C40) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM5/PM30
GRO (>C4-C8) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
GRO (>C8-C12) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
GRO (>C4-C12) #	<10	<10	<10	<10	<10	<10	<10				<10	ug/l	TM36/PM12
Hexavalent Chromium	<2	<2	<2	<2	<2	<2	<2				<2	ug/l	TM38/PM0
Total Dissolved Chromium III	<2	<2	<2	<2	<2	<2	<2				<2	ug/l	NONE/NONE
BOD (Settled) #	<1	<1	<1	1	1	<1	1				<1	mg/l	TM58/PM0
pH #	6.09	7.32	7.35	7.08	6.91	6.31	7.27				<0.01	pH units	TM73/PM0
Total Suspended Solids #	<10	<10	<10	<10	<10	<10	<10				<10	mg/l	TM37/PM0

Please see attached notes for all abbreviations and acronyms

[redacted]

Notification of Deviating Samples

Client Name: Dalradian Gold Ltd
Reference: DCS
Location: Curraghinalt
Contact: [redacted]

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/4442						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/4442

SOILS

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It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

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As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a [redacted] approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

[redacted]

Method Code Appendix

JE Job No: 16/4442

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM37	Modified USEPA 160.2 .Gravimetric determination of Total Suspended Solids. Sample is filtered and the resulting residue is dried and weighed.	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				
TM58	Modified USEPA methods 405.1 and BS 5667-3. Measurement of Biochemical Oxygen Demand. When cBOD (Carbonaceous BOD) is requested a nitrification inhibitor is added which prevents the oxidation of reduced forms of nitrogen, such as ammonia, nitrite and organic nitrogen which exert a nitrogenous demand.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			
NONE	No Method Code	NONE	No Method Code				

[redacted]

[redacted]

Registered Address: [redacted]

[redacted]

Dalradian Gold Ltd

[redacted]

Tel: [redacted]

Fax: [redacted]

Attention :	[redacted]
Date :	18th February, 2016
Your reference :	DCS
Our reference :	Test Report 16/4442 Batch 1 Schedule B
Location :	Curraghinalt
Date samples received :	3rd February, 2016
Status :	Final report
Issue :	1

Seven samples were received for analysis on 3rd February, 2016 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

[redacted]

[redacted] **BSc**
Project Manager

[redacted]

Client Name: Dalradian Gold Ltd
Reference: DCS
Location: Curraghinalt
Contact: [redacted]
JE Job No.: 16/4442

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

J E Sample No.	7-12	37-42											
Sample ID	DCS2	DCS7											
Depth													
COC No / misc													
Containers	V HN P BOD G	V HN P BOD G											
Sample Date	03/02/2016	03/02/2016											
Sample Type	Surface Water	Surface Water											
Batch Number	1	1											
Date of Receipt	03/02/2016	03/02/2016											

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Total Zinc	30	30									<3	ug/l	TM30/PM14

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